DOCUMENT RESUME

ED 384 385 JC 950 345

AUTHOR	Garbowsky, Maryanne M.
TITLE	Interdisciplinary Study: Towards the Millennium.
INSTITUTION	Princeton Univ., NJ. Mid-Career Fellowship Program.
PUB DATE	May 95
NOTE	22p.; In its: Issues of Education at Community Colleges: Essays by Fellows in the Mid-Career Fellowship Program at Princeton University; see JC 950 341.
PUB TYPE	Viewpoints (Opinion/Position Papers, Essays, etc.) (120)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Community Colleges; Core Curriculum; *Curriculum Design; Curriculum Development; General Education; *Humanities; *Interdisciplinary Approach; Liberal Arts; Program Descriptions; Program Evaluation; Program Implementation; Team Teaching; Two Year Colleges

ABSTRACT

Interdisciplinary studies attempt to bring together disparate areas such as English, history, and art into a common curriculum which crosses divisional boundaries. An interdisciplinary approach allows colleges to add to its course offerings without the expense of hiring new faculty, attracts new students and retains them at higher rates, provides opportunities for team teaching and faculty creativity, and overcomes faculty departmental isolation. In addition, it allows students to exercise creativity in the context of meeting broader academic goals and enriches the classroom through the broad base of knowledge and experience presented by the faculty team. Interdisciplinarism is especially timely now because of the current crisis of the humanities, in which they have become fragmented and have been called irrelevant, and is especially relevant to community colleges. Since many two-year college students do not continue with further studies, the interdisciplinary approach gives them a broad based educational experience. Despite the many positive effects of such programs, obstacles exist to their establishment, including struggles over subject matter turf and teachers' fears of having to draw on intellectual traditions outside their own. Perhaps the best approach to establishing a program is to follow the pattern of a successful effort from its inception to current operation. In the end, the benefits of establishing a program far outweigh the challenges, since it can create a community of learning between students and faculty. (Contains 46 references.) (KP)

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ED 384 385

Interdisciplinary Study:

TOWARDS THE MILLENNIUM

Midcareer Fellowship Program

Princeton University

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Maryanne M. Garbowsky

County College of Morris

Randolph, NJ

May, 1995

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Interdisciplinary Study: Towards the Millennium

"To build a house"

"... there was a construction crew that wanted to build a house. So the crew opened a college, which soon split into departments that specialized in hammerology and saw science.

It was not long before members of the hammerology department divided into two sub-specialties, due to a split between the physical hammerologists and the cultural hammerologists. Specialties continued to proliferate, until one day somebody realized that no house was being built" (Mooney 11).

This fable told by Robert Costanza, an associate professor at the University of Maryland's Center of Environmental and Estuarine Studies, parallels the situation in most traditional college curriculums. There is too much "over-specialization" for the faculty and not enough of "the big picture" for students (Mooney 11).

Recently Jacques Barzun, Columbia University's Professor Emeritus, accepted the university's 1994 Hamilton Medal given to commemorate the college's core curriculum, one of "the oldest uninterrupted programs of general education in America" ("The Hamilton" 4). Accepting the award on behalf of all those who have taught the course, Professor Barzun said that the program fought "against Specialism" and that one of its main purposes was "to enlarge the vision, by unfolding a panorama against which to place whatever the student would learn in college and during the rest of his life" (4).

This "panorama" is what interdisciplinary study attempts to provide. We do not live in a vacuum. Nor do we live in isolation from our neighbors, our community, and our environment. Yet when it comes to education, this is precisely

the case. Certainly as human beings it comes as no surprise that we lead "interdisciplinary lives" (Sbaratta 38). Yet that is not what we present to our students. Instead we show them a fragmented replica of life found in the traditional curriculum where we study individual subjects cut off and isolated one from the other. Thus we approach literary works and their authors as if they had no relation to the world around them, as if they had sprung up without regard or reference to their era, to the events of their time, or the current of ideas that nourished and inspired them.

In the interdisciplinary curriculum, this is not the case. Literature is not separate from history, nor music from art, nor philosophy from science. The classes become a microcosm of the real world outside the classroom door and the syllabus reflects the breadth and diversity of real life rather than the narrow restriction of the textbook.

Ernest L. Boyer, president of the Carnegie Foundation for the Advancement of Teaching, believes that the substance of general education should be the "study" of "such issues as the cycle of human life and the role of religion in the world, along with the arts, the environment, and sociological and anthropological issues in other cultures" (Mooney 12). These goals can be best fulfilled through interdisciplinary study. "Subjects are not wholes from the world to be studied in isolation. Nor are they experiences of a special kind with no relation to experiences of other kinds" (Sbaratta 38).

Recently the U.S News and World Report highlighted several schools in which curriculum renovation has yielded good results. In University Heights (Bronx), faculty are not divided into departments but make up "six interdisciplinary teams" guiding students to look at themes from varying perspectives (Toch 53). In this way, students study "fewer subjects more intensively." According to school "reformer" Theodore Sizer, the answer to the superficiality of U.S. schools is "to

teach fewer subjects in greater depth" and to "illuminate the connections between them" (53).

The results have been positive; students have been drawn "deeper into the subject matter" and "understand the relationship of the information they are learning" (Toch 56). Another similar program in Los Angeles documents that not only did students do better in writing and understanding of "abstract concepts" but also had less absenteeism and lower drop out rates (Toch 56).

But let's clarify what interdisciplinary means. The term refers to a variety of attempts to bring together disparate areas such as English, history, art, etc. into a common curriculum. The multi-disciplinary not only crosses departments, but divisional boundaries as well - from the humanities to science to business technology. Most often done in the humanities, interdisciplinary courses can also include vocational areas as well.

A workable definition of interdisciplinary study is found in a recent issue of Change: "Multidisciplinary programs are those in which faculty members bring to bear a discrete set of disciplinary skills and perspectives on common problems (Miller 28). An interdisciplinary course allows for focus on a "topic, rather than a discipline" (Hoffnung 31). It emphasizes "integrating available approaches and resources rather than mastering a single disciplinary approach" (31).

Traditionally critics of this "inclusive" (Watters 17) classroom argue that "combining more than one discipline in a course weakens each of the disciplines" (Sbaratta 33). In the Academic Crisis in the Community College, Dennis McGrath and Martin B. Spear caution against such programs, especially at the community college level where faculty are trying to "bridge the gulf between nontraditional students and academic life" (88). To add interdisciplinarism to this already difficult task tends "to weaken the academic culture further by diluting discipline-based standards of vigor and norms of discourse" (89).

Most recently, Harold Bloom in his latest book The Western Canon: Books and Schools of the Age bemoans the future when "we're not going to have departments of English or literature. A lot of them already are being named departments of cultural studies, and doing Batman comics and theme parks and all sorts of hazari, to use the grand old Yiddish word for it" (McMillen 25).

However, lest we lose all sense of perspective, let us examine the benefits such programs can yield as adjuncts to--rather than replacements of--the traditional curricula.

The advantages of an interdisciplinary approach are multiple and include benefits for the institution, the faculty and the students. Since the nature of interdisciplinary study is " inclusive rather than exclusive," it allows for using the resources the college has already on hand in a new way. Thus, in a period of constrained monies and cutbacks, a college can add to its course offerings without the expense of hiring new faculty--"all personnel and other resources are already extant through existing departments" (Miller 32). Thus the cost of funding a new program is little or nothing.

Furthermore in a time of declining enrollment, it is a way to attract new students. Thus, a "new or growing institution" has the opportunity to start a program in " a small, new field rather than a mediocre one in an established area" (Miller 30).

In an effort to strengthen the humanities in a time of eroding enrollment, North Shore Community College implemented a series of interdisciplinary courses under a new department of interdisciplinary studies. Since that time an array of courses has been developed which have grown in number and have "enjoyed consistent popularity" among students (Sbaratta 38).

For the community college especially, student retention has become a major problem. Interdisciplinary study has been shown to be highly effective in addressing

these problems, especially considering that only " a 1/3 of all beginning full time students at their level earn" terminal degrees (Tinto 26). In this regard, Seattle Central Community College in Washington started a Coordinated Studies Program which not only crosses departments in the humanities, but also in the math-science and professional/technical division. Students meet together in one large class which then breaks up into smaller group sessions.

The students in this program are more involved, not only in their courses, but also in campus wide activities. They see themselves as learning more and participating more than students not in this program. According to Vincent Tinto, this "multi-disciplinary approach... provided a model of learning that encourages students to express the diversity of their experiences and world views." As an added benefit, "it allowed differences in age, ethnicity, and life experience to emerge and become part of the course " (Tinto 27-28). The result of this program was that students were retained in greater numbers, not only those who were adequately prepared for college, but also those with "substantial remedial needs" (29).

In other programs, results have been the same. Faculty at Santa Rosa Junior College have found that by using an interdisciplinary approach in their remediation program, students not only do better, but the rate of attendance and retention was higher (Palmer 62).

Another advantage to the institution is that the program provides an opportunity for faculty development. Not only is the institution involved with teaching students, but also their faculty. An involved and interested faculty will provide a wellspring of enthusiasm in class.

Teachers, as well as students, can "lose interest in their lessons...." But due to the challenges of interdisciplinary courses," each learning situation becomes a novel way of using imagination to create new routes to personal understanding "(Sautter 436). In the exchange and planning that goes into an interdisciplinary curriculum,

teachers are challenged to build bridges and make connections between disciplines. It means more work for teachers but assures them a new way of thinking and seeing than simply out of the narrow lens of one discipline.

For faculty the benefits are many. It helps participating faculty overcome the isolation of their individual departments and gives them an avenue by which to explore " special interests, talents, and expertise which do not fit the traditional discipline mold" (Sbaratta 38).

In my own college, faculty are not only divided by disciplines but also have physical barriers such as separate buildings to contend with. An interdisciplinary course would engage and stimulate faculty from different departments and allow them to overcome both real physical dividers as well as purely artificial ones. This cross-pollination would be healthy for the faculty as a whole as well as for the individual participants. In a survey of attitudes of those involved in the Raritan Valley Community College's interdisciplinary program, faculty enjoyed the presence of "other teachers in the classroom" and thought of team teaching as "one of the main draws to participate in the program" (Valasek 18).

Such courses ground academics in a common goal and help them overcome the normal "insularity of faculty" (Sbaratta 38). According to Philip Sbaratta, "the interdisciplinary structure is a forum for faculty creativity"; it is "an antidote for the 'learned ignoramus,' José Ortega y Gasset's label for the specialist confined by the myopia of his specialty" (39). In addition to regeneration and recreation, the challenge of synthesis in the curriculum would hopefully lead faculty to new research and to produce "scholarship that otherwise might fall though the cracks" (Mooney 12).

But it is the student who reaps the greatest rewards. The traditional classroom has been known to stifle "imagination and creativity," but in the interdisciplinary curriculum the student can fully exercise imagination and

creativity in the context of meeting broader academic goals" and for "longer term learning" (Sautter 436).

The classroom is enriched by the broader base of knowledge and experience presented by the faculty team teaching the course. "Multiple instructors" bring to students "a wider range of academic and experiential background" (Hoffnung 31). Students are not fed "isolated facts," but are encouraged "to discover how ideas are connected" (Geoghegan 458). According to Ernest Boyer, "without an understanding of large patterns," we are not preparing students "for wisdom but for a game of Trivial Pursuit" (458).

In the interdisciplinary classroom where instructors are brought together "to teach collaboratively" the atmosphere takes "on an intellectual richness that traditional courses "lack (Tinto 28). Both students and faculty enjoy the experience of being in class with more than one teacher (Valasek 18). The diversity in the classroom opens up conversation that empowers students to add their own experiences as well as validate "their ability to contribute to the progress of the course" (Tinto 28).

Another result that has come out of one program is that once students try the new interdisciplinary courses, many opt to go back and enroll in more traditional courses. Why? Because, according to one faculty participant, they discover that they want to know more" (Sbaratta 39).

There are many varieties of interdisciplinary studies, ranging from whole new departments, to core curricula, to individual courses, to modules; some that merge simply the humanities area, while others bring together the vocational and professional with the academic. One outstanding example of the latter is MIT (Massachusetts Institute of Technology) which offers an "integrated studies program" for freshmen. In a year-long course, students study six technologies by reading about the subject as well as using a hands on approach. Thus a unit on

timekeeping begins with comparative cultural readings and ends with students designing their own timepiece.

In this way students acquire "an understanding of technology" and at the same time are better able to "understand economic and social history." MIT's goal is to graduate students with both "a broad knowledge of industry" as well as with "transferable skills that will serve them well in later career changes" (Rosenstock 436).

However, courses that commonly make up interdisciplinary studies involve a combination of humanities, such as those offered at Raritan Valley Community College for the past decade. Such courses have been offered successfully at other local New Jersey colleges such as Bloomfield College, Fairleigh Dickinson, and Stockton State College.

At my own institution, the County College of Morris has a history of such courses. Back in the early 1970's, the college offered Humanities I and II, a six credit sequence that encompassed a broad chronological study of history, philosophy, music, and literature. Team taught, it was a humanities elective course.

Today, 20 years later, we are rethinking such a course offering. Currently we offer only a handful of courses that use an interdisciplinary approach. But in the near future we are planning to resurrect a course similar in structure to our Humanities I and II. In preparation for such a change, our college received an NEH grant in the summer of 1993 for an intensive study of poetry. During a four week period--from June 7th to July 1st, twenty-four participants selected from both the full and part-time faculty would complete a "Journey through the Humanities" which would allow them to travel through time and across continents studying poets as diverse as Geoffrey Chaucer, W.B. Yeats, Emily Dickinson, and Jorge Louis Borges. The poets were varied in language, in era, in country of origin, and in theme.

However, not only was there diversity in the poets studied, but in the participants as well: there were faculty from math, visual arts, languages, and music- along with those from English. One of the objectives of the project as stated in the proposal was "To enable the teaching of poetry in English classes where it is traditionally taught, in foreign language classes, and in humanities courses where it is not presently included or minimally utilized, ("Journey" 6).

Thus one of the offshoots of the project was that these faculty would cross traditional disciplinary divides to bring the subject of poetry into their respective classrooms. Not only would the four week saturation in poetry revitalize faculty, but it would also become a challenging interdisciplinary experiment. During the closing week, visiting scholar Linda Georgianni from the University of California at Irvine presented her experiences along with sample syllabi from her college's Humanities Core Courses, a "three quarter sequence dealing with the problem of cultural differences over belief systems, race, and gender" (syllabus). The course readings range from Dante's Inferno to John Berger's Ways of Seeing to Freud's New Introductory Lectures. Faculty participating in the course came from philosophy, English, history and languages.

One option offered as a follow-up project at the end of our grant was to prepare "a course proposal and/or evidence of substantial integration of poetry into existing courses" ("Journey" 19). One participant submitted the literature component to a larger interdisciplinary course which would incorporate philosophy, history, the visual arts, and film among other disciplines. Organized by theme "the artist as social critic," the proposed course would follow a chronological format from Plato to WWII and would be offered as a humanities elective. Thus, our summer grant allowed our college to reconsider and reactivate an earlier interdisciplinary course. Currently the course is under consideration and will hopefully be offered in the next year or two.

But why now? Why after twenty years is our college reconsidering interdisciplinary coursework? Why is "higher education experiencing significant new growth in interdisciplinary scholarship and programs" especially in the humanities? (Miller 28). One reason for the timeliness of a move towards interdisciplinarism is the current "crisis" in the humanities, which according to one professor has been "tortured vocationalism," been called "irrelevant" and is "declining" in enrollment (Bauman 38).

Two figures who have discussed this crisis in the last decade are Walter Jackson Bate and William J. Bennet. According to "The Crisis in English Studies," published in Harvard Magazine, "The humanities are not merely entering, they are plunging into their worst state of crisis since the modern university was formed..." (Jeffords 102). William Bennet agrees and describes the "heart of the humanities" as "fragmented, even shattered" (102). One of the major culprits is the "increasing fragmentation and specialization within the university" (Jeffords 102).

In answer to the problem of "over specialization," they suggest "interdisciplinary" or "collaborative" projects- both within and across departments (Jeffords 106), focusing on connections rather than differences, on commonality rather than diversity. In the traditional humanities curriculum, information is " thrown out to... students like brightly colored bits of confetti. " Faculty do not " tell students how this information links to other disciplines or how all learning is interconnected." It is as if the "disciplines were created by a supreme being and that we cannot cross lines between them" (Englehardt 105).

In sharp contrast, courses which are interconnected like an Ethics and Values course used as an example in a journal article was extremely successful. Linking philosophy, literature, religion and history, this course has been ranked one of the most "enjoyable" by students and has helped them to learn more effectively since it used "more than one discipline" (Englehardt 105).

According to Murray Krieger, director of the University of California's Humanities Research Institute, " we are facing a revolution of the curriculum...The disciplines are being undone, redone, amalgamated in new ways by questions that we weren't asking only a few years ago" (Miller 31). Mary Clark, the organizer of a five day conference on " Rethinking the Curriculum," says " The world is changing, and we are standing still" (Mooney 12).

According to an article in The Futurist entitled "University of the 21st Century," interdisciplinary studies better serve the needs of our students' future. The belief is that the "interdisciplinary approach" is "needed to deal with a changing world" since our current system is becoming " increasingly inadequate" (53). The Commission on the University of the 21st century called for " an end to the ' tyranny of the disciplines'" ("University" 53), believing that the problems students will face in the future will not be "organized according to the categories of scholars" (Gaff 57) and that the solutions will "cross the lines of traditional disciplines." "Given the competitive climate around the globe, it is essential that we draw from all the intellectual resources of every field to improve productivity and to attack the scourges of the human community" (Gaff 57).

In addition, since many of our students in the two-year college do not go on to more in depth study in an academic subject, the interdisciplinary approach gives them a broad base and serves their individual educational needs better. According to various studies reviewed by ERIC, " the interdisciplinary approach... makes room for the generalist" (Palmer 59).

Due to the change in our economy base from industrial/manufacturing to a service oriented base and to the decline in employment opportunities, jobs of the future will require " more thought, more analysis, more decision making and more understanding. Our economy cannot provide jobs for the uneducated" (Renyi 444). To this end, the interdisciplinary focus on integration between subject areas will

benefit students. " An academic, aesthetic, creative, and social learning environment is one way to equip students for the challenge they will face in the complex cultural mosaic that will be their future" (Geoghegan 458).

Looking to the future, author Peter Drucker in a recent issue of the Economist describes our world as one " in the midst of a transformation in which the organizing principle of life is evolving from analysis (or rational thought) to perception " (Oddleifson 451). He believes that " the world's new realities are configurations and as such call for perception as much as for analysis" (451). If we do not prepare for this change, Drucker predicts a dismal future. From the year 2992, he looks back and sees "democracies" marching "straight from the climax of their 20th century victory over totalitarianism towards disaster" (451).

This dire prediction should encourage educators to rethink the curriculum and see how it can better fit the fast changing world picture, a world that will be multi-cultured and more "globally oriented" (Perrin 453). Students of the future need to be trained not for "specific tasks" but they must be "creative thinkers and problem solvers...able to work well with others" (Perrin 452).

Interdisciplinary course work can better prepare students for these goals. Since it is the occasion of an "interdependence of learning" (Hoffnung 31) and departs from the traditional "content oriented" classroom, it "focuses on skills of thinking, analyzing, and understanding" (Renyi 439). In answer to the U.S. Department of Education's observation that our nation is "at risk" because of our schools' inability to prepare "students for the complex lives they will face as adults in the new millennium, "Judith Renyi suggests an arts/humanities based curriculum using an interdisciplinary approach. In these courses the goals are not short-termed, but long termed. Instead of producing an end product, the focus is on improving our human state, trying to open ourselves to the past, the present, and to the future by stressing commonalities, not differences.

A recent article in the New York Times confirms this new trend. One Juilliard School of Music graduate, who is currently a founder of a new multimedia company called Music Pen, states that when she was a musician performing as "a concert pianist," she would never have thought she would go into the technology business. "It's delightful to see that the future of technology has so much to do with creativity" (Pulley B2).

In an innovative, yet extreme position, M. Garrett Bauman suggests a whole new core curriculum for the liberal arts of the 21st century. Its four components include global studies, self-reliance skills, interdisciplinary studies, and selected traditional studies (Bauman 40). He stresses one "essential element," that "all courses must combine skills performance and intellectual rigor" (41).

To remedy the "smorgasbord" (Bauman 42) that most curricula serve, that is "subjects pedagogically unrelated to one another--or to real life" (Hanna 603), Bauman proposes "interdisciplinary courses, particularly those combining technologies and traditional liberal arts" (42). Thus, students will be taught to "deal with the edges between fields and systems" and will be "required to synthesize as well as specialize" (42). Some courses he foresees in this curriculum would include Technology in Literature, Technology and Values, or Social Effects of Technology (43). He suggests that such courses along with courses from the other three areas would make up the students' first two years of college and would give them "a solid base of general liberal education on which to erect a major" (43). In the community college, this is especially appropriate.

Bauman is not alone in calling for a whole revamping of today's liberal arts curriculum. There are other such proposals, ranging from one at University College in Toronto which insists "on breadth, at least at the beginning of a university career, before the student moves on to more specialized work" (Morgan 35). To that end, the new "Integrated Studies (Unity of Knowledge) program" allows for time spent

on "interdisciplinary studies in the fields of the humanities, social sciences, and natural sciences" (Morgan 36). Not as drastic as Bauman's proposal, this program aims at "curriculum renewal" (Morgan 37) and at "unity" rather than "fragmentation of knowledge" at the university level (38).

For many educational prognosticators, the 21st century looms ahead with frightening (even apocalyptic) prospects. A whole issue of Change magazine focused on the question of technology's impact on the liberal arts. Because today's world and the world of tomorrow is "vastly more complex" (Edgerton 5), we cannot ignore the place of technology, which some call "a new liberal art" (Edgerton 4). One of the key questions faced by the contributors to this issue of Change is how to "infuse the stuff of engineering in a deeper way throughout the entire curriculum" or the question posed by the editor--"Why Would a Humanist Envy an Engineer?" (4).

As the 21st century beckons, our educational curriculum must be rethought, revitalized, and renewed. One direction clearly indicated through research is interdisciplinary study, which has been "championed" by the Sloan Foundation and the Carnegie Report on the Improvement of Postsecondary Teaching for "the thinking skills they foster" (Bauman 43). If we are to prepare students for a world in which "problems. . . tend not to have the fixed, single correct answers that characterize" academic problems (Eisner 595), and if "fragmentation--or lack of interconnection. . . is one of the chief characteristics of contemporary American society," we must give students something that aids them in seeing "overall relationships" "between diverse parts" (Jeffords 104-105).

The next question is how to begin such a change. One of the best ways is to follow the pattern of a successful program from its inception through its current operation and to learn from it. There are many such opportunities available both

nationally and locally. Journals such as Alternative Higher Education: The Journal for Non-traditional Studies and The Education Digest publish many such studies.

A particularly healthy pattern is found in the experience of the Utah Valley Community College in Orem. In 1987, they began a sophomore level interdisciplinary core course in Ethics and Values (Englehardt). The first necessity was administrative support; in this case a highly supportive dean rallied faculty and ran interference with the administration. The timeline was another important consideration since there are hurdles to overcome, so that this particular program began work at least two years before its projected implementation.

The proposal first went through a humanities committee and then through a college curriculum committee. A three-year grant from the National Endowment for the Humanities funded a pilot program which gave faculty a chance to prepare through several summer seminars in which visiting scholars came and lectured. Faculty workshops were offered with a consultant from the NEH--Donald Schmeltekopf, a former Midcareer Fellowship participant and founding president of the Community College Humanities Association (Englehardt 98). After this preparation and development, the course was set up and continues to be an exceptional adjunct to the curriculum, one that students say is "the most important and most enjoyable class they have taken in college" (105).

A local and more recent program to use as an example is that offered at Raritan Valley Community College. In the fall of 1993, three "Introduction to Humanities" courses were offered. Student opinions surveyed by Thomas E. Valasek confirmed that students enjoy "the interdisciplinary team-teaching approach it employs" (21).

Despite the many positive effects of such programs, there are many obstacles to overcome, not the least of which is "subject-matter turf" between faculty, and the amount of time and work that goes into such a change. One experienced instructor

notes that there is also the expectation on the part of students that the teachers have "control" over the subject area, when in reality this "is impossible in new courses drawing on intellectual traditions outside their own" (Englehardt 101). Thus another problem may be "fear," which on the part of the instructor "is a natural accompaniment to new interdisciplinary courses" (Englehardt 101).

However the benefits clearly outweigh the drawbacks. For in the end it is not only the students who will gain, but the faculty as well. Team-teaching offers faculty the opportunity to work together, to learn from each other, and to build mutual respect. Though teaching styles may differ, they will enrich the course and may, as one participant found, build a creative tension in the classroom which "proved to be complementary in the best sense" (Hoffnung 33).

As the professor moves into the next century and faces the prospects of "a period of limited mobility and growth" (Watermeier 280), such cross disciplinary courses will fire the imagination of faculty, renewing their vitality and giving them new opportunities for professional development and growth. "At their best, interdisciplinary programs go beyond intellectual integration (as important as that is) to create a community of learning between students and faculty" (Gaff 60).

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